

## ABSTRACT

A safe, reduced pressure apparatus for generating water vapor from hydrogen and oxygen and feeding high purity moisture to processes such as semiconductor production. The apparatus eliminates the possibility of the gas igniting by maintaining  
5 the internal pressure of the catalytic reactor for generating moisture at a high level while supplying moisture gas from the reactor under reduced pressure. A heat dissipation reactor improvement substantially increases moisture generation without being an enlargement in size by efficient cooling of the reactor alumite-treated fins.